

## 7. LAMPIRAN

### Lampiran 1. Tes Normalitas Kadar Air Serbuk Bit Merah

#### Tests of Normality

GABUNGAN		Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
KDR_AIR	A, suhu 110	.167	6	.200*	.980	6	.941
	A, suhu 130	.266	6	.200*	.854	6	.209
	A, suhu 150	.177	6	.200*	.936	6	.575
	B, suhu 110	.252	6	.200*	.840	6	.154
	B, suhu 130	.225	6	.200*	.861	6	.239
	B, suhu 150	.250	6	.200*	.904	6	.410
	C, suhu 110	.194	6	.200*	.961	6	.790
	C, suhu 130	.214	6	.200*	.933	6	.553
	C, suhu 150	.173	6	.200*	.926	6	.498
	D, suhu 110	.230	6	.200*	.892	6	.361
	D, suhu 130	.177	6	.200*	.970	6	.867
	D, suhu 150	.177	6	.200*	.936	6	.575

\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

### Lampiran 2. Tes Normalitas Aktivitas Antioksidan (% inhibition) Serbuk Bit Merah

#### Tests of Normality

GABUNGAN		Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
AKTV_ANT	A, suhu 110	.158	6	.200*	.973	6	.892
	A, suhu 130	.213	6	.200*	.922	6	.479
	A, suhu 150	.185	6	.200*	.932	6	.547
	B, suhu 110	.215	6	.200*	.919	6	.468
	B, suhu 130	.191	6	.200*	.845	6	.177
	B, suhu 150	.265	6	.200*	.824	6	.098
	C, suhu 110	.193	6	.200*	.954	6	.732
	C, suhu 130	.218	6	.200*	.919	6	.468
	C, suhu 150	.229	6	.200*	.956	6	.747
	D, suhu 110	.187	6	.200*	.912	6	.440
	D, suhu 130	.103	6	.200*	.990	6	.990*
	D, suhu 150	.254	6	.200*	.835	6	.135

\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

### Lampiran 3. Tes Homogenitas Bulk Density Serbuk Bit Merah

#### Test of Homogeneity of Variances

BULK\_DEN

Levene Statistic	df1	df2	Sig.
5.102	11	60	.000

Lampiran 4. Deskripsi Kadar Air Serbuk Bit Merah

**Descriptives**

KDR\_AIR

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
A, suhu 110	6	4.8700	1.414E-02	5.774E-03	4.8552	4.8848	4.85	4.89
A, suhu 130	6	4.6067	6.439E-02	2.629E-02	4.5391	4.6742	4.54	4.69
A, suhu 150	6	3.8350	3.271E-02	1.335E-02	3.8007	3.8693	3.80	3.89
B, suhu 110	6	4.5267	4.885E-02	1.994E-02	4.4754	4.5779	4.47	4.58
B, suhu 130	6	4.4200	1.673E-02	6.831E-03	4.4024	4.4376	4.40	4.44
B, suhu 150	6	3.6283	2.714E-02	1.108E-02	3.5998	3.6568	3.60	3.67
C, suhu 110	6	4.3650	7.176E-02	2.930E-02	4.2897	4.4403	4.25	4.45
C, suhu 130	6	4.1067	.2719	.1110	3.8214	4.3920	3.73	4.43
C, suhu 150	6	3.4383	3.189E-02	1.302E-02	3.4049	3.4718	3.40	3.48
D, suhu 110	6	4.1317	3.189E-02	1.302E-02	4.0982	4.1651	4.10	4.19
D, suhu 130	6	3.8817	4.708E-02	1.922E-02	3.8323	3.9311	3.82	3.95
D, suhu 150	6	3.2550	3.271E-02	1.335E-02	3.2207	3.2893	3.20	3.29
Total	72	4.0888	.4841	5.706E-02	3.9750	4.2025	3.20	4.89

Lampiran 5. Tes Homogenitas Kadar Air Serbuk Bit Merah

**Test of Homogeneity of Variances**

KDR\_AIR

Levene Statistic	df1	df2	Sig.
17.337	11	60	.000

Lampiran 6. Post Hoc Kadar Air Serbuk Bit Merah

**KDR\_AIR**

Duncan<sup>a</sup>

GABUNGAN	N	Subset for alpha = .05							
		1	2	3	4	5	6	7	8
D, suhu 150	6	3.2550							
C, suhu 150	6		3.4383						
B, suhu 150	6			3.6283					
A, suhu 150	6				3.8350				
D, suhu 130	6				3.8817				
C, suhu 130	6					4.1067			
D, suhu 110	6					4.1317			
C, suhu 110	6						4.3650		
B, suhu 130	6						4.4200		
B, suhu 110	6							4.5267	
A, suhu 130	6							4.6067	
A, suhu 110	6								4.8700
Sig.		1.000	1.000	1.000	.363	.625	.284	.121	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 6.000.

Lampiran 7. Anova Kadar Air Serbuk Bit Merah

**ANOVA**

KDR\_AIR

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	16.176	11	1.471	189.347	.000
Within Groups	.466	60	7.766E-03		
Total	16.642	71			

Lampiran 8. Deskripsi Aktivitas Antioksidan (% inhibition) Serbuk Bit Merah

**Descriptives**

AKTV\_ANT

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
A, suhu 110	6	73.523250	5.51839E-02	2.25E-02	73.465338	73.581162	73.4369	73.5946
A, suhu 130	6	75.928250	.396808	.161996	75.511825	76.344675	75.4734	76.4898
A, suhu 150	6	78.764233	2.56232E-02	1.05E-02	78.737343	78.791123	78.7326	78.7976
B, suhu 110	6	79.570583	8.21777E-02	3.35E-02	79.484343	79.656824	79.4859	79.7017
B, suhu 130	6	80.476133	2.17556E-02	8.88E-03	80.453302	80.498964	80.4514	80.4994
B, suhu 150	6	82.737300	.704180	.287480	81.998308	83.476292	82.0477	83.6185
C, suhu 110	6	85.800333	.624047	.254766	85.145436	86.455230	84.8933	86.5697
C, suhu 130	6	87.362317	2.40126E-02	9.80E-03	87.337117	87.387516	87.3253	87.3878
C, suhu 150	6	90.174900	.169247	6.91E-02	89.997286	90.352514	89.9428	90.4406
D, suhu 110	6	93.385333	.169428	6.92E-02	93.207529	93.563137	93.1650	93.5843
D, suhu 130	6	94.934083	3.37308E-03	1.38E-03	94.930544	94.937623	94.9295	94.9389
D, suhu 150	6	96.971233	7.11777E-02	2.91E-02	96.896537	97.045930	96.8894	97.0488
Total	72	84.968996	7.435304	.876259	83.221785	86.716207	73.4369	97.0488

Lampiran 9. Anova Aktivitas Antioksidan (% inhibition) Serbuk Bit Merah

**ANOVA**

AKTV\_ANT

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3919.562	11	356.324	3829.056	.000
Within Groups	5.583	60	9.306E-02		
Total	3925.146	71			

Lampiran 10. Post Hoc Aktivitas Antioksidan (% inhibition) Serbuk Bit Merah

**AKTV\_ANT**

Duncan<sup>a</sup>

GABUNGAN	N	Subset for alpha = .05											
		1	2	3	4	5	6	7	8	9	10	11	12
A, suhu 110	6	73.523250											
A, suhu 130	6		75.928250										
A, suhu 150	6			78.764233									
B, suhu 110	6				79.570583								
B, suhu 130	6					80.476133							
B, suhu 150	6						82.737300						
C, suhu 110	6							85.800333					
C, suhu 130	6								87.362317				
C, suhu 150	6									90.174900			
D, suhu 110	6										93.385333		
D, suhu 130	6											94.934083	
D, suhu 150	6												96.971233
Sig.		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 6.000.

Lampiran 11. Tes Homogenitas Aktivitas Antioksidan (% inhibition) Serbuk Bit Merah

**Test of Homogeneity of Variances**

AKTV\_ANT

Levene Statistic	df1	df2	Sig.
14.898	11	60	.000

Lampiran 12. Anova Bulk Density Serbuk Bit Merah

**ANOVA**

BULK\_DEN

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.255	11	2.314E-02	9062.590	.000
Within Groups	1.532E-04	60	2.554E-06		
Total	.255	71			

Lampiran 13. Deskripsi Bulk Density Serbuk Bit Merah

**Descriptives**

BULK\_DEN

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
A, suhu 110	6	.638850	3.27338E-03	1.34E-03	.635415	.642285	.6365	.6448
A, suhu 130	6	.621917	1.09803E-03	4.48E-04	.620764	.623069	.6204	.6234
A, suhu 150	6	.603400	6.89928E-04	2.82E-04	.602676	.604124	.6025	.6044
B, suhu 110	6	.628900	1.08628E-03	4.43E-04	.627760	.630040	.6277	.6305
B, suhu 130	6	.613017	7.11102E-04	2.90E-04	.612270	.613763	.6121	.6139
B, suhu 150	6	.600367	3.77712E-04	1.54E-04	.599970	.600763	.5998	.6008
C, suhu 110	6	.596267	1.73743E-03	7.09E-04	.594443	.598090	.5937	.5978
C, suhu 130	6	.566100	1.17303E-03	4.79E-04	.564869	.567331	.5647	.5676
C, suhu 150	6	.538417	7.93515E-04	3.24E-04	.537584	.539249	.5374	.5393
D, suhu 110	6	.506750	3.10403E-03	1.27E-03	.503493	.510007	.5035	.5107
D, suhu 130	6	.478600	1.14543E-03	4.68E-04	.477398	.479802	.4769	.4800
D, suhu 150	6	.453467	6.68331E-04	2.73E-04	.452765	.454168	.4525	.4542
Total	72	.570504	5.98962E-02	7.06E-03	.556429	.584579	.4525	.6448

Lampiran 14. Tes Normalitas Bulk Density Serbuk Bit Merah

**Tests of Normality**

GABUNGAN		Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
BULK_DEN	A, suhu 110	.257	6	.200*	.793	6	.057
	A, suhu 130	.197	6	.200*	.954	6	.729
	A, suhu 150	.141	6	.200*	.976	6	.916
	B, suhu 110	.167	6	.200*	.933	6	.548
	B, suhu 130	.205	6	.200*	.923	6	.483
	B, suhu 150	.145	6	.200*	.954	6	.729
	C, suhu 110	.265	6	.200*	.826	6	.100
	C, suhu 130	.225	6	.200*	.910	6	.433
	C, suhu 150	.209	6	.200*	.869	6	.272
	D, suhu 110	.207	6	.200*	.860	6	.233
	D, suhu 130	.167	6	.200*	.964	6	.819
	D, suhu 150	.246	6	.200*	.892	6	.363

\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Lampiran 15. Tes Normalitas Intensitas Warna Serbuk Bit Merah

**Tests of Normality**

GABUNGAN		Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
ABSORBNS	A, suhu 110	.257	6	.200*	.861	6	.238
	A, suhu 130	.171	6	.200*	.978	6	.930
	A, suhu 150	.197	6	.200*	.940	6	.613
	B, suhu 110	.245	6	.200*	.827	6	.103
	B, suhu 130	.204	6	.200*	.965	6	.821
	B, suhu 150	.186	6	.200*	.966	6	.834
	C, suhu 110	.262	6	.200*	.827	6	.104
	C, suhu 130	.234	6	.200*	.804	6	.072
	C, suhu 150	.255	6	.200*	.911	6	.436
	D, suhu 110	.182	6	.200*	.895	6	.374
	D, suhu 130	.246	6	.200*	.873	6	.287
	D, suhu 150	.182	6	.200*	.936	6	.573

\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Lampiran 16. Anova Intensitas Warna Serbuk Bit Merah

**ANOVA**

ABSORBNS

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.023	11	.275	14481.890	.000
Within Groups	1.139E-03	60	1.898E-05		
Total	3.025	71			

Lampiran 17. Post Hoc Bulk Density Serbuk Bit Merah

**BULK\_DEN**

Duncan<sup>a</sup>

GABUNGAN	N	Subset for alpha = .05											
		1	2	3	4	5	6	7	8	9	10	11	12
D, suhu 150	6	.453467											
D, suhu 130	6		.478600										
D, suhu 110	6			.506750									
C, suhu 150	6				.538417								
C, suhu 130	6					.566100							
C, suhu 110	6						.596267						
B, suhu 150	6							.600367					
A, suhu 150	6								.603400				
B, suhu 130	6									.613017			
A, suhu 130	6										.621917		
B, suhu 110	6											.628900	
A, suhu 110	6												.638850
Sig.		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 6.000.

Lampiran 18. Tes Homogenitas Intensitas Warna Serbuk Bit Merah

**Test of Homogeneity of Variances**

ABSORBNS

Levene Statistic	df1	df2	Sig.
30.758	11	60	.000



Lampiran 19. Deskripsi Intensitas Warna Serbuk Bit Merah

**Descriptives**

ABSORBNS

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
A, suhu 110	6	.333567	6.37453E-03	2.60E-03	.326877	.340256	.3256	.3409
A, suhu 130	6	.318617	2.78687E-04	1.14E-04	.318324	.318909	.3182	.3190
A, suhu 150	6	.299783	8.06019E-04	3.29E-04	.298937	.300629	.2987	.3008
B, suhu 110	6	.399467	3.08199E-03	1.26E-03	.396232	.402701	.3939	.4019
B, suhu 130	6	.367867	1.40665E-03	5.74E-04	.366390	.369343	.3658	.3697
B, suhu 150	6	.346733	1.76257E-03	7.20E-04	.344884	.348583	.3445	.3497
C, suhu 110	6	.578950	1.04753E-02	4.28E-03	.567957	.589943	.5684	.5919
C, suhu 130	6	.566733	7.10990E-03	2.90E-03	.559272	.574195	.5591	.5742
C, suhu 150	6	.550017	1.87341E-03	7.65E-04	.548051	.551983	.5479	.5533
D, suhu 110	6	.857150	1.58335E-03	6.46E-04	.855488	.858812	.8550	.8588
D, suhu 130	6	.836650	1.74442E-03	7.12E-04	.834819	.838481	.8337	.8382
D, suhu 150	6	.823383	1.57152E-03	6.42E-04	.821734	.825033	.8211	.8252
Total	72	.523243	.206399	2.43E-02	.474742	.571744	.2987	.8588

Lampiran 20. Post Hoc Intensitas Warna Serbuk Bit Merah

**ABSORBNS**

Duncan<sup>a</sup>

GABUNGAN	N	Subset for alpha = .05											
		1	2	3	4	5	6	7	8	9	10	11	12
A, suhu 150	6	.299783											
A, suhu 130	6		.318617										
A, suhu 110	6			.333567									
B, suhu 150	6				.346733								
B, suhu 130	6					.367867							
B, suhu 110	6						.399467						
C, suhu 150	6							.550017					
C, suhu 130	6								.566733				
C, suhu 110	6									.578950			
D, suhu 150	6										.823383		
D, suhu 130	6											.836650	
D, suhu 110	6												.857150
Sig.		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 6.000.

Lampiran 21. Tes Homogenitas Kemampuan Pembasahan Serbuk Bit Merah

**Test of Homogeneity of Variances**

PEMBSHAN

Levene Statistic	df1	df2	Sig.
13.681	11	60	.000

Lampiran 22. Deskripsi Kemampuan Pembasahan Serbuk Bit Merah

**Descriptives**

PEMBSHAN

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
A, suhu 110	6	0:15:01.97	0:00:09.20	0:00:03.75	0:14:52.32	0:15:11.62	0:14:48.36	0:15:12.48
A, suhu 130	6	0:12:17.51	0:00:06.44	0:00:02.63	0:12:10.75	0:12:24.26	0:12:09.30	0:12:28.27
A, suhu 150	6	0:10:35.08	0:00:07.84	0:00:03.20	0:10:26.86	0:10:43.30	0:10:25.40	0:10:47.33
B, suhu 110	6	0:14:15.08	0:00:02.59	0:00:01.06	0:14:12.36	0:14:17.80	0:14:10.39	0:14:17.48
B, suhu 130	6	0:11:23.23	0:00:05.29	0:00:02.16	0:11:17.68	0:11:28.77	0:11:15.85	0:11:30.80
B, suhu 150	6	0:08:03.52	0:00:32.71	0:00:13.36	0:07:29.19	0:08:37.85	0:07:26.61	0:08:48.12
C, suhu 110	6	0:05:37.11	0:00:11.31	0:00:04.62	0:05:25.23	0:05:48.98	0:05:25.29	0:05:54.18
C, suhu 130	6	0:03:25.32	0:00:08.22	0:00:03.35	0:03:16.70	0:03:33.94	0:03:14.88	0:03:38.58
C, suhu 150	6	0:02:27.55	0:00:10.16	0:00:04.15	0:02:16.89	0:02:38.21	0:02:13.52	0:02:40.74
D, suhu 110	6	0:01:54.25	0:00:04.06	0:00:01.66	0:01:49.99	0:01:58.52	0:01:47.92	0:01:58.69
D, suhu 130	6	0:00:54.20	0:00:01.31	0:00:00.54	0:00:52.82	0:00:55.58	0:00:52.94	0:00:56.37
D, suhu 150	6	0:00:42.81	0:00:00.40	0:00:00.16	0:00:42.39	0:00:43.23	0:00:42.23	0:00:43.28
Total	72	0:07:13.14	0:05:10.11	0:00:36.55	0:06:00.26	0:08:26.01	0:00:42.23	0:15:12.48

Lampiran 23. Post Hoc Kemampuan Pembasahan Serbuk Bit Merah

**PEMBSHAN**

Duncan<sup>a</sup>

GABUNGAN	N	Subset for alpha = .05										
		1	2	3	4	5	6	7	8	9	10	11
D, suhu 150	6	0:00:42.81										
D, suhu 130	6	0:00:54.20										
D, suhu 110	6		0:01:54.25									
C, suhu 150	6			0:02:27.55								
C, suhu 130	6				0:03:25.32							
C, suhu 110	6					0:05:37.11						
B, suhu 150	6						0:08:03.52					
A, suhu 150	6							0:10:35.08				
B, suhu 130	6								0:11:23.23			
A, suhu 130	6									0:12:17.51		
B, suhu 110	6										0:14:15.08	
A, suhu 110	6											0:15:01.97
Sig.		.094	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 6.000.

Lampiran 24. Tes Normalitas Kemampuan Pembasahan Serbuk Bit Merah

**Tests of Normality**

		Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
PEMBSHAN	A, suhu 110	.146	6	.200*	.950	6	.696
	A, suhu 130	.167	6	.200*	.968	6	.846
	A, suhu 150	.179	6	.200*	.966	6	.832
	B, suhu 110	.241	6	.200*	.865	6	.255
	B, suhu 130	.208	6	.200*	.969	6	.857
	B, suhu 150	.210	6	.200*	.905	6	.411
	C, suhu 110	.220	6	.200*	.904	6	.408
	C, suhu 130	.176	6	.200*	.974	6	.902
	C, suhu 150	.145	6	.200*	.966	6	.831
	D, suhu 110	.148	6	.200*	.944	6	.648
	D, suhu 130	.219	6	.200*	.900	6	.393
	D, suhu 150	.183	6	.200*	.947	6	.672

\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

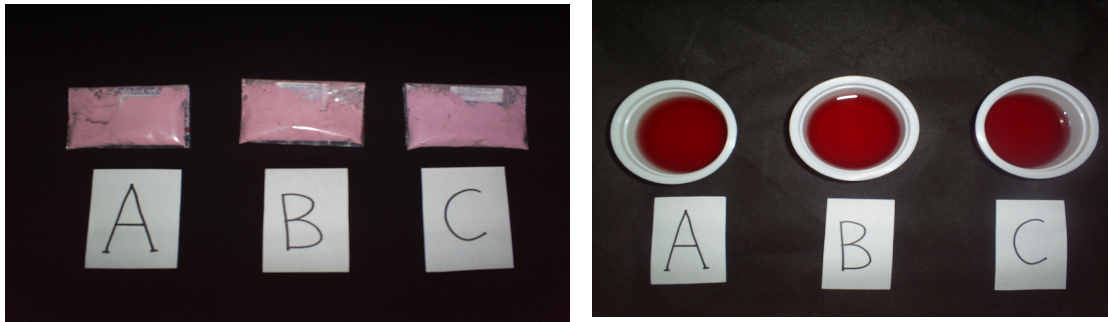
Lampiran 25. Anova Kemampuan Pembasahan Serbuk Bit Merah

**ANOVA**

PEMBSHAN

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	6819985	11	619998.599	4623.179	.000
Within Groups	8046.393	60	134.107		
Total	6828031	71			

Lampiran 27. Serbuk Bit Merah dan Larutan Serbuk Bit Merah



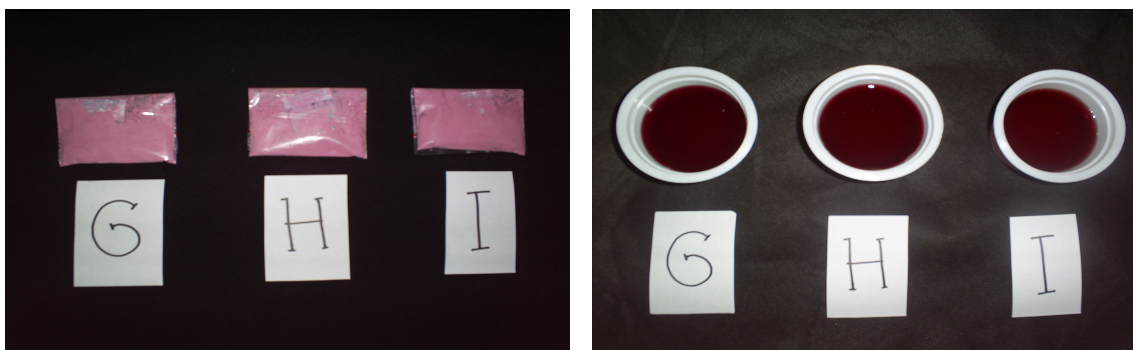
Gambar Serbuk Bit Merah dan Larutan Serbuk Bit Merah  
pada Perbandingan Maltodekstrin dan Ekstrak Bit (50 : 50)

(A) Temperatur *Inlet* 110°C; (B) Temperatur *Inlet* 130°C; (C) Temperatur *Inlet* 150°C



Gambar Serbuk Bit Merah dan Larutan Serbuk Bit Merah  
pada Perbandingan Maltodekstrin dan Ekstrak Bit (40 : 60)

(D) Temperatur *Inlet* 110°C; (E) Temperatur *Inlet* 130°C; (F) Temperatur *Inlet* 150°C



Gambar Serbuk Bit Merah dan Larutan Serbuk Bit Merah  
pada Perbandingan Maltodekstrin dan Ekstrak Bit (30 : 70)

(G) Temperatur *Inlet* 110°C; (H) Temperatur *Inlet* 130°C; (I) Temperatur *Inlet* 150°C



Gambar Serbuk Bit Merah pada Perbandingan Maltodekstrin dan Ekstrak Bit (20 : 80)  
(J) Temperatur *Inlet* 110°C; (K) Temperatur *Inlet* 130°C; (L) Temperatur *Inlet* 150°C